CENTRAL VALLEY FLOOD MANAGEMENT PLANNING PROGRAM

FloodSAFE CALIFORNIA

Central Valley Flood Protection Plan
FINAL Summary
Management Actions Workshop

Disaster Preparedness and Flood Warning

July 23, 2010, 9:00 am - 12:30 pm

Center for Collaborative Policy, CSUS
815 S Street, First Floor, Sacramento, CA 95811

1. Participants:25

#	NAME	ORGANIZATION
•	Eric Clyde*	DWR (HAFOO)
•	Pam Jones*	Kearns and West
•	Katie Cox*	CCP
•	Craig Wallace*	MWH
•	Nikki Blomquist	DWR (FlOODSAFE Communications)
•	Paige Caldwell	USACE
•	Jim Eto*	DWR CVFPO
•	Sonny Fong*	DWR
•	Connie Ford	Sacramento County Water Agency
•	Jim Lopes	DWR
•	Shelly McGuiness	USACE
•	Brian Smith	DWR (DIRWM)
•	Adam Sutkus*	CCP
•	Mark Johnson	Cal EMA
•	*Bill Darsie*	*KSN, Inc.*
•	*Jafar Faghih*	*MWH*
•	*John Green*	*Stockton East Water District*
•	*Larry Waddle*	*San Joaquin County*
•	*Jennifer Hobbs*	*FWS*
•	*Marill Jacobson*	*DWR*
•	*Mike Chandler*	*Yocha Dehe Fire Department*
•	*Doug Weinrich*	*FWS*
•	*Jim Eckman*	*DWR (FESSRO)*
•	*Brian Heiland*	*DWR*
•	*Keith Seligman*	*Kings River Conservation District*
•	*Merritt Rice*	*DWR*

** Workshop team*
Italic = Attended via webinar

This summary only includes comments made during the workshop. Comments submitted after the workshop will be posted at http://www.water.ca.gov/cvfmp

2. Refinement of the Initial Management Actions Set

MA-063: Coordinate flood response planning and clarify roles and responsibility related to flood preparedness and emergency response

- Description/Methodology
  - Training is often slashed when budgets are cut. It needs to have long-term funding and consistent application.
  - State and local governments need to better clarify their roles.
- Economic Considerations:
  - May contribute to the goal of reducing operation and maintenance costs because everyone will know what they are supposed to be doing.
  - Annual Cost to Operate: no change is true when there is a program already in place, if not there would be start up costs associated.
- Advantages/Disadvantages
  - A clear and shared understanding of roles and responsibilities is very important. There are several groups that are working on the same issues and should be pulled together. (Delta Stewardship Council, USACE, CalEMA).
  - Could decrease damage to critical infrastructure if everyone knows their role and has training.
  - Consider permitting and rights-of-entry for levee systems.
  - Traffic impacts need to be evaluated to determine if they are or can be exempted from CEQA.
  - Communication systems should be evaluate so agencies can communicate on the same radio frequency.
  - Need for automated methodology for updating information lists of interested parties.
  - Need to consolidate plans and clarify which plans agencies are to follow.
- Integration with other programs:
  - Integrate State and federal agencies with local and NGO's.
  - HAM radio operators are critical during disasters.
  - The Army Corps of Engineers (USACE) should be included.
  - Cal EMA is currently working on annexes to the State Emergency Plan, in particular flood management. They are working with the National Guard, Conservation Corps, Boating and Waterways, Employment Development Department, California Utilities Commission and the CA Resiliency Alliance.

MA-064: Improve communication and public awareness of emergency response procedures and terminology

- Description/Methodology
  - Refer to 1997 FEAT Report regarding guidelines for evacuation.
  - It was suggested that "evacuation" might be to narrow. It might be better to increase public awareness.
  - Delta communities are having problems with funding eligibility because of their size.

- Public Outreach:
    - Add education for families, children; programs such as ready.gov.
    - Incorporate police and fire to enhance and enable local responders and allow them to better understand their role.
    - Local governments need to coordinate and determine who has the power to evacuate.
- Economic Considerations
    - This management action could save money.
    - It is expensive to fund ongoing maintenance cost.
    - Website upkeep is very valuable, especially updating stream gauge data.
    - Expenses should be handled at the County level.
    - Need funding for small/rural communities.
- Advantages/Disadvantages
    - Need to identify traffic routes for evacuations.
    - Liability for evacuation plan; who pays if it doesn't work.
    - Need a less technical method for alerting of flood.
- Integration with other agencies:
        - Cal EMA should be included
        - Cities and Counties
        - FEMA
    - Avoid overlapping efforts.
    - Look at Sacramento's County and City Plans.
    - Refer to efforts in SB27

MA-065: Establish standard flood warning systems and procedures

- Description/Methodology
    - FEMA has a standardized system that they require.
    - FEMA requires the adoption of NIMS to get federal funding.
    - SEMS is State (NIMS is FEDERAL) structure and model for how emergencies are handled.
    - SEMS is based on the ICS structure.
    - Alert and Warning is adopted in 56 operational areas.
- Economic Considerations
    - Systems are expensive to maintain.
    - Sirens are expensive
    - Vandalism is a problem
    - Low capital cost- depends on what you are referring to.
    - Need to look at different warning systems: sirens, EAS, autodialing (Reverse 911) and identify all possible resources.
    - Look to decibel maps

- Public Outreach:
  - Need to make sure that there is an awareness of what the sirens mean.
  - Need for a speaker on the sirens to explain the emergency and what needs to be done.
  - Outreach to children is beneficial.
- Advantages/Disadvantages:
  - Hard to reach rural communities.
  - Sirens are loud (noise pollution).
  - Warnings can result in anxiety, stress and panic.
  - Many people resist evacuation.
  - Warning fatigue.
- Technical Considerations
  - Consider power outages.
  - Sirens must have back-ups.
  - Consider Reverse 911.
- Integration with other agencies
  - Coordinate with local governments.

MA-066: Improve stream gage network for forecasting purposes.

- Description/Methodology
  - Without stream gages, you can't tell people what is going to happen.
  - USACE has about 150 gages in CA.
  - CA Data Exchange (CDEC) has a number of agencies and partners with infrastructure to maintain.
  - Some agencies don't want to share information that is proprietary in nature.
  - Include improving existing systems
- Public Outreach:
  - Dams are public information and should all information should be available to the public.
- Economic Considerations
  - low capital cost might not be accurate.
  - May be relatively low.
  - Low cost to install, costly to maintain.
  - Low annual cost.
  - Reservoir cost might decrease because of less mistakes made.
  - May be local cost share opportunities.
  - USACE funding for stream gauging is being cut.

- Advantages/Disadvantages:
    - Would improve reservoir operations.
    - Would help give advance warning.
    - Good to have this information when briefing DWR or other agencies.
    - Water supply and recreation benefit from gages.
    - Helps with hydraulic models.
    - It is beneficial to know how much water to release downstream.
    - Disclosure from private firms that operate reservoirs for hydropower is challenging.
    - Hard to know where a problem would occur.
    - Can be difficult to gain permits for new gauging systems.

MA-067: Implement advanced weather forecast-based operations to increase reservoir management flexibility

- Description/Methodology
    - Would need to change the water control manuals for all reservoirs to use forecasts.
    - May affect the State's flood responsibility.
- Economic Considerations :
    - Theoretically low capital cost, if everything is already in place
    - Setting it up is expensive: requires a lot of time and energy.
    - Increased O&M cost when you implement new technology.
    - Annual Cost references stream gage network.
        - Anywhere you have a detention basin, this is relied heavily upon.
    - The more advanced warning, the easier it is to determine how to operate reservoirs.
- Advantages/Disadvantages:
    - In regards to the ecosystem, knowing how much water to hold back could be potentially beneficial to the plants and animals.
    - There has been work with this on New Bullard's Bar, but there hasn't been an event to use it.
    - Avoid using the word "proven". It has been tested, it is promising, but there are significant challenges.
    - Liability for release of water that isn't replenished during coming storm (if forecast is incorrect).
    - A large release could result in loss of water in the basin during the summer.
- Technical Considerations:
    - Management Action discussed forecasted coordination and not forecast based operations; should be changed.
- Integration with other Agencies:
    - National Weather Service
    - Programs under HAFOO

MA-068: Create system wide levee instrumentation for early warning systems

- Description/Methodology
  - Potential for insurance increase
  - Currently reservoirs have piezometers on them
  - Piezometers in the delta are always wet and the ones upstream are only wet during flooding. There is a difference in how the levees work.
  - There is only information when the levees are wet.
  - Piezometers on a levee is untested.
- Advantages/Disadvantages
  - Levees tend to break in unexpected places.
  - If a levee has felt some stress due to seismic changes or high water , they may be looked at to be maintained.
  - If a levee is certified as 100 or 1200 year, it is no longer monitored.
- Economic Considerations:
  - Maintenance is expensive.
- Technology
  - Piezometers might not be the technology that is used.
  - Possible use of earthquake technology.

3. Identification of Gaps in the Initial Management Actions Set

- Family Emergency Preparedness
- Public Awareness
- Education at K-12 level